

West Michigan TMC

Serving the Grand Rapids Area Freeways



Suzette Peplinski, PE

Michigan Department of Transportation

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August 2007

Control Room Coverage

Control Room Hours of Operation

Day	Time Period	Time of Day
Mondays – Thursdays	All	6:00 a.m. to 8:00 p.m.
Fridays	May through Labor Day	6:30 a.m. to 9:00 p.m.
Sundays	May through Labor Day	5:00 p.m. to 8:00 p.m.
Fridays	Labor Day through April	6:30 a.m. to 8:00 p.m.
Sundays	Labor Day through April	None
Special Events	All	As needed
Holidays	New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.	None

The following report is limited to data collected during the hours of operation for the control room and within the ITS device coverage area.

ITS Device Locations and Coverage Area



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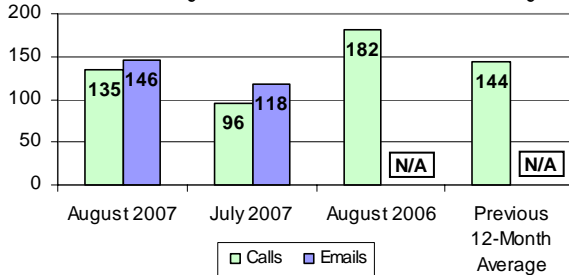
August 2007



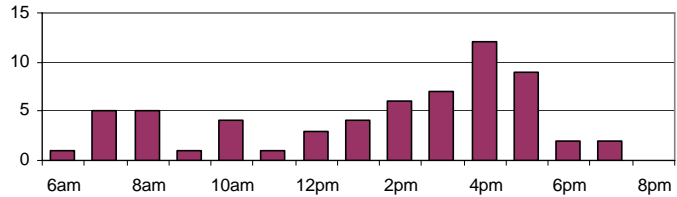
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Control Room Support Activity

Monthly Communication History



Month Total of Unplanned Incidents per Weekday Hour



Calls and Emails by Type

Agency	Calls			Emails		
	In	Out	Total	In	Out	Total
City of Grand Rapids	0	0	0	12	0	12
City of Wyoming	0	1	1	0	0	0
Grand Rapids Police Department	5	66	71	0	0	0
Kent County Road Commission	0	1	1	0	0	0
MDOT, Construction	7	4	11	37	1	38
MDOT, Traffic/ITS	2	0	2	4	0	4
MDOT, Maintenance	0	0	0	8	1	9
MDOT, Other	1	0	1	35	1	36
Media	10	0	10	11	10	21
Michigan State Police	1	11	12	0	0	0
Sheriff, Kent Co.	0	0	0	0	0	0
URS Corporation	0	0	0	13	3	16
ITS System Maintenance	6	13	19	0	0	0
Other	3	4	7	10	0	10
Month Total	35	100	135	130	16	146

Monthly High Impact Unplanned Incident Activity

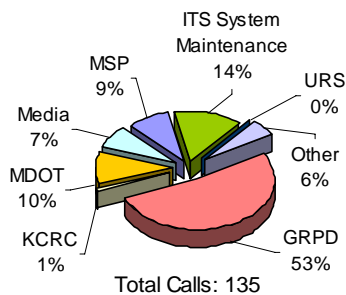
Incident	Aug 2007	Jul 2007	Aug 2006	Previous 12-Month Avg.
Lane Closures	4	6	6	9
Ramp Closures	2	1	1	1
Freeway Closures	2	1	1	1

Total Monthly Unplanned Incidents by Roadway

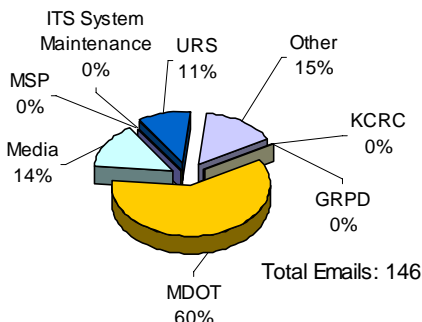
Freeway	Aug 2007		Jul 2007		Aug 2006		Previous 12-Month Avg.	
	Total	per mi.	Total	per mi.	Total	per mi.	Total	per mi.
I-96 (4.5 mi.)*	4	0.9	2	0.4	2	0.4	5	1.1
I-196 (8.5 mi.)*	21	2.5	5	0.6	26	3.1	24	2.8
US-131 (11 mi.)*	41	3.7	26	2.4	93	8.5	61	5.5
Total	66	2.8	33	1.4	121	5.0	89	3.7

*Mileages reflect the portion of the roadway within the coverage area.

Calls by Type



Emails by Type



Traffic Management Center News

Severe weather on August 23 resulted in two non-functional CCTV cameras at I-96/I-196 and I-96/Fulton St. The problem is in the process of being assessed and repaired.



A Control Room Operator meeting was held on August 23 to discuss recent events and discuss upcoming operations.

Control room operating hours were extended until 11pm on three Friday evenings to assist with messages for weekend construction.

CCTV traffic images are now available on the MDOT MI Drive website for use by the public.

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August 2007

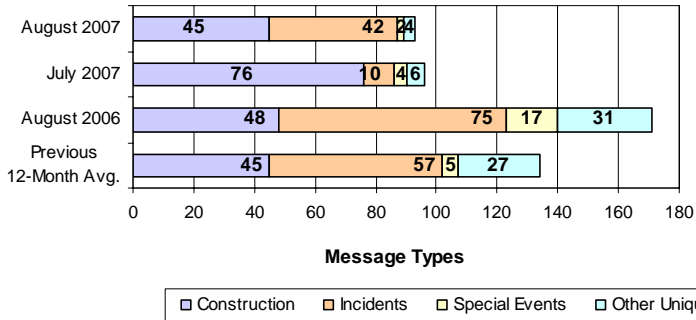


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Traveler Information Activity

- The MDOT ITS Control Room provides traffic information to freeway users via 10 dynamic message signs (DMS) positioned in key locations along the freeway system in the greater Grand Rapids area.

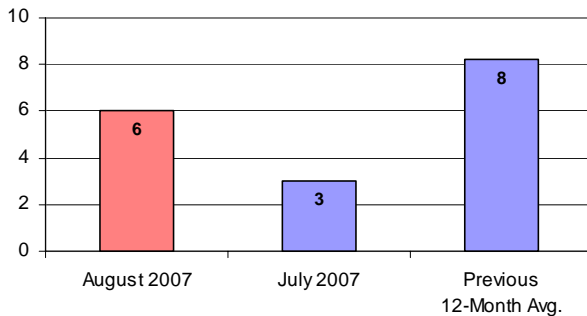
Unique DMS Messages by Type



Top Three Utilized DMS

1. Westbound I-96 at Fulton/M-21
2. Westbound I-96 at Plymouth Avenue
3. Northbound US-131 at 28th Street

Monthly Incident Notification History

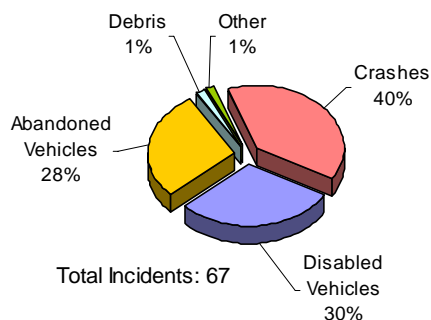


Monthly Incident Notification Communication Accuracy

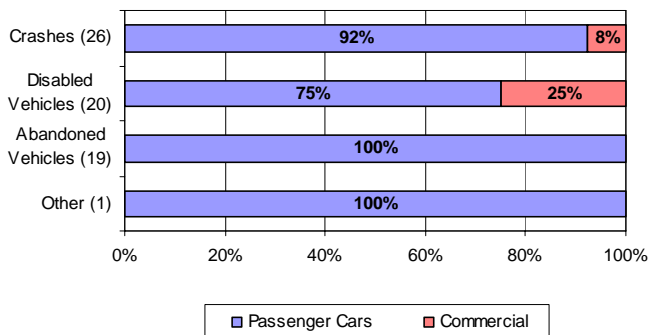
	Aug 2007	Jul 2007	Previous 12-Month Avg.
Format Correct	100.0%	100.0%	91.5%
Content Correct	83.3%	100.0%	93.9%

Incident Management Information

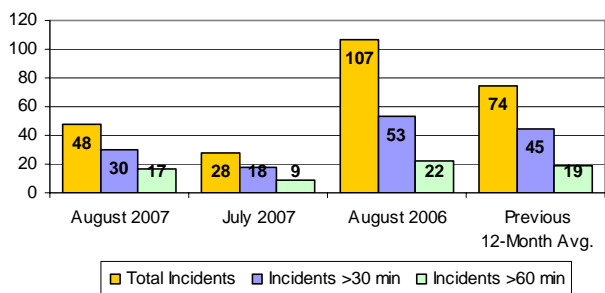
Incidents Managed by Type



Vehicle Composition of Incidents

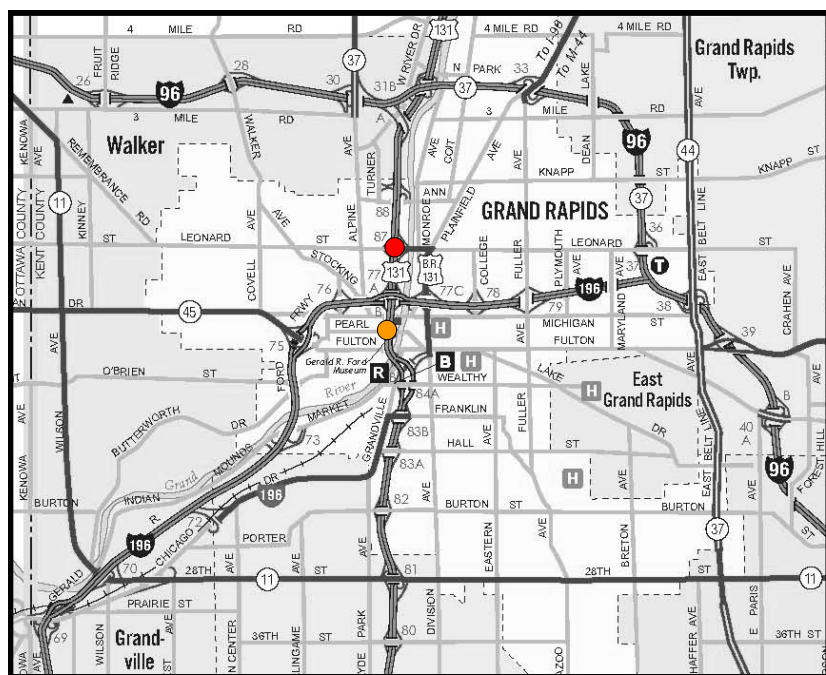
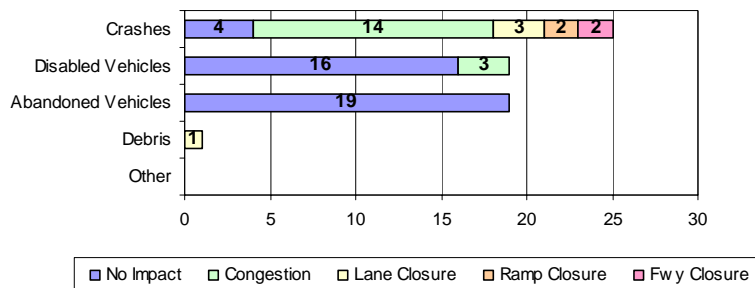


Incident Duration History*



*Incident Duration History does not include abandoned vehicles.

Traffic Impacts by Incident Type



Incident Hot Spots

- 5 crashes
- 3 crashes

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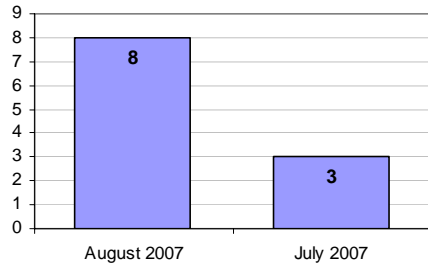
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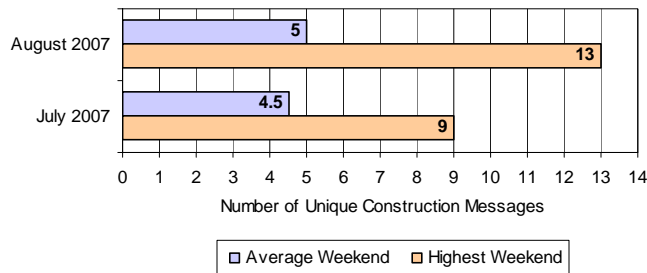
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Construction Management Information

Incidents Occurring in Construction Zones



Weekend* Construction DMS Message Activity



*Friday, Saturday and Sunday.

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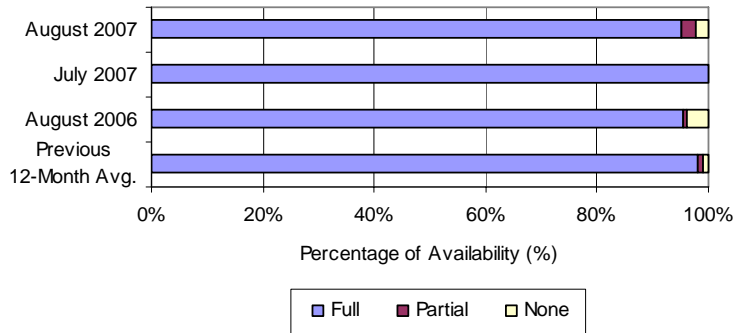
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ITS Field Infrastructure Reliability

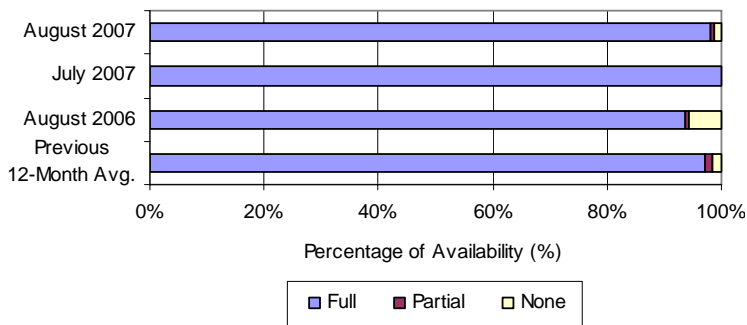
Overall CCTV Camera System Availability



Individual CCTV Camera Availability

Camera	Full	Partial	None
1 US-131 @ 28th St	100%	-	-
2 US-131 @ Franklin St	100%	-	-
3 US-131 @ Market Ave	100%	-	-
4 US-131 @ Pearl St	100%	-	-
5 US-131 @ I-196	100%	-	-
6 US-131 @ Leonard St	100%	-	-
7 US-131 @ Ann St	100%	-	-
8 US-131 @ I-96	100%	-	-
9 US-131 @ Hall St	100%	-	-
10 US-131 @ West River Dr	100%	-	-
11 I-196 @ Chicago Dr	98%	2%	-
12 I-196 @ Lake Michigan Dr	98%	2%	-
13 I-196 @ Lane Ave	98%	2%	-
14 I-196 @ College Ave	100%	-	-
15 I-196 @ Fuller Ave	100%	-	-
16 I-96 @ I-196	63%	2%	35%
17 I-96 @ Fulton/M-21	63%	30%	7%

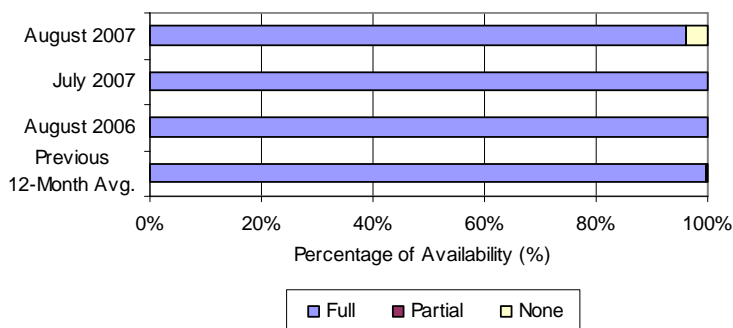
Overall DMS System Availability



Individual Dynamic Message Sign Availability

DMS	Full	Partial	None
1 WB I-96 @ Fulton St (M-21)	89%	-	11%
2 WB I-196 @ Chicago Dr	98%	2%	-
3 EB I-196 @ Plymouth Ave	100%	-	-
4 SB US-131 @ West River Dr	100%	-	-
5 SB US-131 @ Ann St	100%	-	-
6 NB US-131 @ Leonard St	100%	-	-
7 SB US-131 @ Pearl St	100%	-	-
8 SB US-131 @ Hall St	98%	2%	-
9 NB US-131 @ 36th St	96%	2%	2%
10 NB US-131 @ 28th St	100%	-	-

Overall VSS System Availability



Individual Variable Speed Sign Availability

VSS	Full	Partial	None
1 SB US-131 @ Pearl St	100%	-	-
2 NB US-131 @ Market Ave	100%	-	-
3 SB US-131 @ Market Ave	100%	-	-
4 NB US-131 @ Franklin St	85%	-	15%

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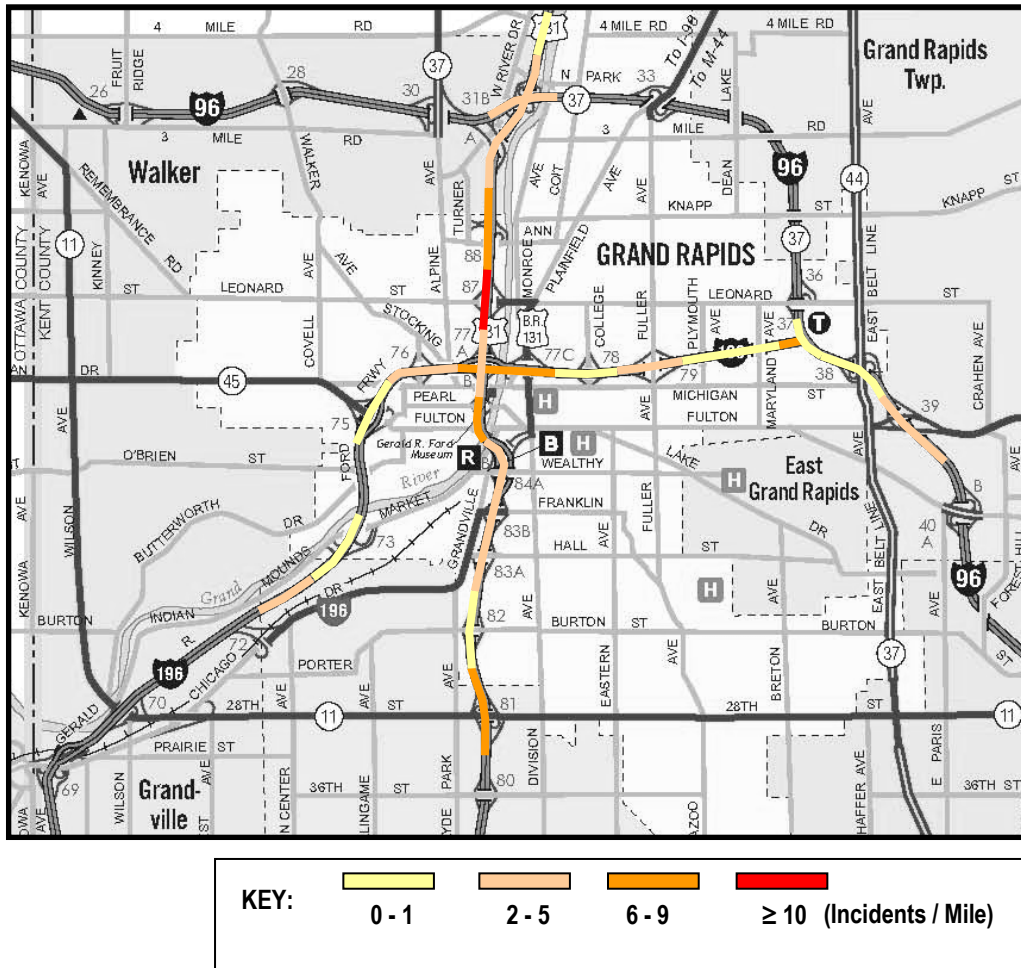
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Safety Summary

August 2007 Incident Density by Freeway Segment



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DATA KEY INFORMATION

Table	Description	Purpose	Data Source
Month Total of Unplanned Incidents per Weekday Hour	Displays the total unplanned incidents for 1-hour increments over a 24-hour period.	Provides a snapshot view of variability of incidents by time of day.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Monthly High Impact Unplanned Incident Activity	Displays the number of major unplanned incidents for the current month, previous month, month last year and the monthly average for the previous 12 months.	Provides a snapshot view of the major incidents that affect the roadway and freeway interchanges along with historical data.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Total Monthly Unplanned Incidents by Roadway	Displays the total unplanned incidents by freeway and the density of incidents based on freeway coverage.	Provides a snapshot view of the number of incidents per freeway per month.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Monthly Communication History	Displays the number of telephone calls and emails (incoming and outgoing) for the Control Room Operators for the current month, previous month, month last year and a monthly average for the previous 12 months.	Provides a snapshot view of the control room workload in a historical context.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Calls and Emails by Type	Displays the number and types of call and email activity for the Control Room operators, separating incoming and outgoing calls.	Provides a snapshot view of the Control Room call distribution and any apparent trends with the call volume or type.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Calls by Type	Displays the percentage distribution of call activity for the Control Room operators.	Provides a snapshot view of the Control Room call distribution and any apparent trends with the call volume or type.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Emails by Type	Displays the percentage distribution of email activity for the Control Room operators.	Provides a snapshot view of the Control Room email distribution and any apparent trends with the email volume or type.	Manually entered information by the operator.

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Unique DMS Messages by Type	Displays the total number of unique DMS messages by type that occurred during the month.	Provides a snapshot view of the level of effort and need related to DMS messages.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Top Three Utilized DMS	Displays the top 3 DMS in terms of the number of unique messages displayed for the month.	Provides a snapshot view of the "most active" DMS for traveler information, which may indicate areas where additional DMS or other forms of traveler information may be necessary.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Monthly Incident Notification History	Displays the number of email incident notifications sent out by Control Room Operators for the current month, previous month, month last year and the monthly average for the previous 12 months.	Provides a snapshot view of the control room workload in a historical context.	<u>QA/QC Log</u> Manually entered information by operations supervisor.
Monthly Incident Notification Communication Accuracy	Displays the accuracy of email incident notification messages sent out to stakeholders. Accuracy measures include format and content.	Provides a quantitative method of quality control on operator interactions with stakeholders.	<u>QA/QC Log</u> Manually entered information by operations supervisor.

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Incidents Managed by Type	Displays the distribution of incident types.	Provides a snapshot view of the composition of incidents.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Vehicle Composition of Incidents	Displays the number of incidents that involved commercial vehicles compared to passenger cars for each incident type.	Provides a snapshot view of the incidents involving commercial vehicles.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Incident Duration History	Displays the total number of incidents compared with the number of incidents with durations exceeding 30 minutes and 60 minutes. (current month, previous month, month last year and the monthly average for the previous 12 months.)	Provides a snapshot view of the duration of incidents managed by the control room.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Traffic Impacts by Incident Type	Displays traffic impact distributions by incident type.	Provides a snapshot view of the typical traffic impacts for each incident type.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Incident Hot Spots	Displays the most frequent locations for accidents and disabled vehicles.	Provides a snapshot view of where operators should concentrate their attention.	<u>Control Room Activity Log</u> Manually entered information by the operator.

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Incidents Occurring in Construction Zones	Displays the number of unplanned incidents occurring in construction zones for the current and previous months.	Provides a snapshot view of the number of incidents occurring in construction zones.	<u>Control Room Activity Log</u> Manually entered information by the operator.
Weekend Construction DMS Message Activity	Displays the average and maximum number of unique construction messages posted during a full (Friday-Sunday) weekend in the current and previous months.	Provide an snapshot view of the quantity of messaging occurring during the weekend.	<u>Control Room Activity Log</u> Manually entered information by the operator.

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Overall Camera System Availability	Displays the percentage of CCTV camera availability for the current month, previous month, month last year and the monthly average for the previous 12 months.	Provides a snapshot view of system availability in relation to historical data.	<u>Daily Shift Report</u> Manually entered information by the operator.
Individual CCTV Camera Availability	Displays the percentage of time each individual CCTV camera is functioning at full, partial and zero capacity.	Provides a detailed view of ITS system availability.	<u>Daily Shift Report</u> Manually entered information by the operator.
Overall DMS System Availability	Displays the percentage of Dynamic Message Sign availability for the current month, previous month, month last year and the monthly average for the previous 12 months.	Provides a snapshot view of system availability in relation to historical data.	<u>Daily Shift Report</u> Manually entered information by the operator.
Individual Dynamic Message Sign Availability	Displays the percentage of time each individual Dynamic Message Sign is functioning at full, partial and zero capacity.	Provides a detailed view of ITS system availability.	<u>Daily Shift Report</u> Manually entered information by the operator.
Overall VSS System Availability	Displays the percentage of Variable Speed Sign availability for the current month, previous month, month last year and the monthly average for the previous 12 months.	Provides a snapshot view of system availability in relation to historical data.	<u>Daily Shift Report</u> Manually entered information by the operator.
Individual Variable Speed Sign Availability	Displays the percentage of time each individual Variable Speed Sign is functioning at full, partial and zero capacity.	Provides a detailed view of ITS system availability.	<u>Daily Shift Report</u> Manually entered information by the operator.
Incidents by Freeway Segment	Displays incident density per segment of roadway within the ITS device coverage. Red indicates a freeway with the highest incident density. Dark orange, light orange and light yellow represent decreasing levels of density, respectively.	Provides a graphic representation of incident density to assist in choosing locations for future ITS devices.	<u>Daily Shift Report</u> Manually entered information by the operator.